The proposed theory supplements existing theories and provides an approach to the solution of two- and three-dimensional problems. Further research, it is stated, will lead to a more precise statement of basic assumptions and permit the formulation of a more comprehensive theory, treating the phenomenon in all its complexity. The present work is the result of scientific investigations carried out at the instance of planning and industrial organizations. The work was done under the direction of the author at the mechanical testing laboratory of the Nauchno-issledovatel'skiy institut matematiki i mekhaniki (Scientific Research Institute of Mathematics and Mechanics) of the Leningrad State University. The author expresses special thanks for aid in reviewing and editing to G.A. Nikolayev, Professor, Doctor of Technical Sciencs, Honored Worker in Science and Technology and to V.M. Chebanov, Candidate of Physical and Mathematical Sciences. There are 63 references, of which 56 are Soviet, 5 English, and 2 German.

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Approximate Theory of Deformation (Cont.) 472

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AVAILABLE: Library of Congress

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8-22-58

Card 10/10

Talypov, G.B.

PHASE I BOOK EXPLOITATION SOV/4343

Soveshchaniye po teorii liteynykh protsessov, 3d

Usadochnyye protsessy v metallakh; trudy soveshchaniya (Shrinkage Processes in Metals; Transactions of the Third Conference on the Theory of Casting Processes) Moscow, AN SSSR, 1960. 281 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B.B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V.S. Rabeznikov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This collection of articles is intended for scientific workers, engineers, technicians of scientific research institutes and industrial plants, and for faculty members of schools of higher education.

COVERAGE: The collection contains technical papers presented at the Third Conference on the Theory of Casting Processes, organized by Liteynaya sektsiya Komissii po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Casting Section of the Commission for Machine-Building Technology of the Institute of Science of Machines, Academy of Sciences USSR) and by Institut metallurgii imeni Baykova AN SSSR (Institute of Metallurgy imeni A.A. Baykov, Academy of Sciences USSR). The most serious defects in castings, ingots, and welds as a result of metal shrinkage are reviewed. Factors contributing to the formation of shrinkage cavities, porosity, cracks, fissures, distortion, and internal stresses are analyzed along with measures taken to prevent and remedy them. The hydrodynamics of molten metals and the process of solidification of metals are discussed. Also presented are resolutions adopted at the Conference with regard to the problem of shrinkage in metals. No personalities are mentioned. Most papers are accompanied by bibliographic references, the majority of which are Soviet.

TABLE OF CONTENTS:

Shrinkage Processes (Cont.) SOV/4343

AVAILABLE: Library of Congress (TS230.S7)

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S/137/61/000/005/028/060
A006/A106

AUTHOR: Talypov, G.B.

TITLE: Approximate theory of welding deformations and stresses

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 17, abstract 5E104 ("Issledovn. protsessy v metallakh" Moscow, AN SSSR, 1960, 264-278)

TEXT: The author suggests an approximate theory of welding deformations and stresses based on the following tolerances: 1) The metal loses the capacity of resisting plastic deformations at a given mean temperature T_c. 2) During welding a moving, high-power, concentrated heat zone in a very limited section of the work piece is developed up to a temperature $T \geqslant T_c$. 3) The width of the heat-affected zone remains constant. 4) Changes in the structure and the mechanical properties and also the deformations (stresses) are determined by the difference $T_c - T_o$, where T_o is the temperature of the surrounding medium.

V. G.

[Abstracter's note: Complete translation]

Card 1/1

TALYPOV, G.B.

PHASE I BOOK EXPLOITATION SOV/4630

Leningrad. Universitet

Mekhanika (Mechanics) [Leningrad] 1960. 254 p. (Series: Its: Uchenyye zapiski, no. 280. Seriya matematicheskikh nauk, vyp. 35) Errata slip inserted. 1,725 copies printed.

Sponsoring Agency: Leningradskiy ordena Lenina gosudarstvennyy universitet imeni A. A. Zhdanova.

Resp. Ed.: N. N. Polyakhov, Professor; Ed.: T. I. Kulagina; Tech. Ed.: Ye. G. Zhukova.

PURPOSE: This collection of articles is intended for scientists, engineers at NII's (scientific research institutes) and design offices and also for students of advanced courses in related fields.

COVERAGE: The collection consists of original investigations in the field of modern mechanics including general mechanics, theory of elasticity, and hydroaerodynamics. No personalities are mentioned. References accompany all articles except one.

TALYPOV, G.B.; KAMENTSEV, V.N.

Investigating the yeild point and some other effects in case of combined stress loading. Uch.zap.LGU no.280: 113-131 '60. (MIRA 13:7)
(Strength of materials)

TALYPOV, G.B.

To the editors of the journal "Avtomaticheskaia Svarka."
Avtom. svar. 13 no. 10:48-49 O'60. (MIRA 13:10)

(Electric welding) (Deformations (Mechanics))

S/753/61/000/001/002/007

AUTHORS: Kamentsev, V.N., Talypov, G.B.

TITLE: Investigation of the yield and failure boundary under composite loads.

SOURCE: Leningrad. Universitet. Matematiko-mekhanicheskiy fakul'tet. Issledovaniya po uprugosti i plastichnosti. no.1. 1961, 95-106.

TEXT: This report on an experimental laboratory investigation of various modes of loading and their effect on the yield boundary and the failure boundary is primarily intended to clarify the influence of the Bauschinger effect on the above-stated boundaries. This study investigates the influence of the microstresses engendering the Bauschinger effect on these boundaries in the absence of internal macrostresses. The modes of loading employed in the experiment ensure a total identity of the prehistory of all specimens. Tubular-shaped specimens were made of 55-mm diam Steel-3 rod material which in the annealed state had $\sigma_{so} = 2{,}300$ kg/cm^2, $\sigma_{bo} = 4{,}170$ kg/cm^2, $E = 2.08 \cdot 10^7$ kg/cm^2, $\mu = 0.29$. In-plane stresses were achieved by the simultaneous action of an axial force and internal pressure. The ends of the specimens were stoppered with threaded Cu plugs, one of which contained a pressure-conduit nipple for the internal-pressure input. The present investigation comprises an extension of previous experimental work reported in Uch. zap. LGU,

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no. 280, 1959, and in Information Bulletin no. 1 on the subject "Scientific fundamentals of strength and plasticity," Moscow, Izd. AN SSSR, 1960, with the introduction of different loading conditions. First loading mode: The specimens were subjected to axial tension to 1.2 σ_{so}, followed by unloading and reloading to fracture. The results obtained show that the yield boundary conserves its shape, expands, and is displaced in the direction of the preliminary plastic deformation (PPD), and that the nominal failure boundary remains practically unchanged as compared with its initial shape. Second loading mode: A 90° change in the direction of the PPD was investigated. Each of the specimens was first exposed to an internal pressure to $\sigma_i = 1.2\ \sigma_{so}$, was completely unloaded, and then was loaded up to failure. Results obtained justify the conclusion that in this loading mode the yield boundary expands and retains its shape, and that its center is displaced in a direction which differs but little from the direction of the PPD. It is also concluded that identical PPD of Steel 3 in a longitudinal and transverse direction leads to an identical displacement and expansion of the yield boundary. The failure boundary was practically the same as the initial boundary. Third loading mode: All specimens were subjected to an axial tension to $\sigma_{ij} > \sigma_{so}$, unloading, an internal pressure up to $\sigma_{ik} > \sigma_{so}$, and unloading. Then each specimen was loaded to failure. Three stages were examined: (1) Both σ_{ij} and $\sigma_{ik} = 1.2\ \sigma_{so}$, (2) $\sigma_{ij} = 1.2\ \sigma_{so}$,

$\sigma_{ik} = 1.1\ \sigma_{so}$, (3) both σ_{ij} and $\sigma_{ik} = 1.4\ \sigma_{so}$. The results of the tests indicate that the nominal yield boundaries in these instances are also free of corner points, and that they retain their initial shape. It is found that for $\sigma_{ik} = 1.2\ \sigma_{so}$ the material "remembers" its prehistory, but that it "forgets" it with $\sigma_{ik} > 1.4\ \sigma_{so}$. This is indicated by the directional shifts of the yield boundary. The direction and magnitude of the displacement of the yield boundary depend not only on the direction of the antecedent PPD, but also on their magnitude and the sequence in which they were experienced. The failure boundaries are little affected or altered, except that with $\sigma_{ik} > 1.4\ \sigma_{so}$, and upon 84-hr aging at T= 70°C, the nominal failure boundary does not conserve its initial shape and expands significantly in the directions of the stresses. It is concluded that an exposure of Steel 3 to PPD in a given direction with subsequent aging can produce a significant increase in its strength in the direction of its subsequent operational loading. It is also noted that the "forced aging" after PPD leads not only to an expansion of the nominal failure boundary in specified directions, but also to a rotation of the nominal failure boundary as a whole, as a result of which the nominal stresses in certain directions become smaller than the initial nominal stresses. This leads to formation of "ears" and "depressions" similar to those noted by R. Hill for deep drawing. The findings of R. Schmidt relative to the effect of longitudinal stretching and its hardening effect

in a transverse direction are discussed in the light of the present findings. There are 3 figures, 6 tables, and 6 references (3 Russian-language Soviet and 3 Russian-language translations of Western original writings).

ASSOCIATION: Kafedra teorii uprugosti matematiko-mekhanicheskogo fakul'teta Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Department of the Theory of Elasticity, School of Mathematics and Mechanics, Leningrad State University imeni A. A. Zhdanov).

KAMENTSEV, V.N.; TALYPOV, G.B.

Effect of preliminary plastic deformation and natural aging limit of flow and failure of low-carbon steel. Issl.po uprug.i plast. no.1:186-191 '61. (MIRA 15:2)
(Steel--Testing)

KAMENTSEV, V.N.; TALYPOV, G.B.

Failure limit of low-carbon steel under simple and combined loads. Issl.po uprug.i plast. no.1:192-201 '61. (MIRA 15:2)

(Steel—Testing)

TAIYPOV, G.B.

Bauschinger effect in AMG-6T alloy. Issl.po uprug.i plast. no.1:202-204 '61. (MIRA 15:2)
(Alloys—Testing)

TALYPOV, G.B. (Leningrad)

Yield and breakdown points for low-carbon steel subjected to a simple and combined loading. Effect of aging. Izv.AN SSSR.Otd. tekh.nauk.Mekh.i mashinostr. no.6:125-130 N-D '61. (MIRA 14:11)
(Steel--Testing)

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S/135/61/000/012/003/008
A006/A101

1.2300

AUTHOR: Talypov, G. B., Candidate of Technical Sciences

TITLE: Initial deformation in bimetals obtained by building-up

PERIODICAL: Svarochnoye proizvodstvo, no. 12, 1961, 12-13

TEXT: The author attempts to evaluate quantitatively the initial deformations in bimetals produced by rolling and building-up, and to determine temperature conditions of the building-up process assuring least initial deformation. Specimens cut out of the 1Kh18N9T (1Kh18N9T) steel cladding layer and the Ст.4С (St.4S) base layer of the same bi-metal sheet were tested and curves were plotted showing the dependence of yield limit σ_m on temperature. The author derives a series of formulae to calculate deformation produced by rolling or building-up and draws the following conclusions: Initial deformations (stresses) of bimetallic sheets produced by rolling, can be reduced only by changing the combination of the metals of the cladding and the base layer with close α_n and α_s ($\alpha_n > \alpha_c$) and sufficiently different characteristics T_{kn} and T_{ks} ($T_{kn} > T_{ks}$) α_n is the mean value of the linear expansion factor of the cladding metal layer within the investigated temperature range; α_s is the same factor for the base

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Initial deformation in bimetals ...

metal layer; T_{kn} is the temperature at which the cladding metal layer looses its capacity of resisting plastic deformations; T_{ks} is the same temperature for the base metal layer. Initial deformations (stresses of bi-metal sheets produced by building-up) can practically be excluded if building-up is carried out by pre-heating the base up to temperature T_o, i.e. the initial constant temperature of the base layer at which building-up begins. T_o is determined by formula (16):

$$T_o = T_{ks}\left[1 - \left(\frac{\alpha_n}{\alpha_s} - 1\right)\left(2 - \frac{T_{kn}}{T_{ks}}\right)\right]$$

The practical application of this recommendation will not entail technological and other difficulties. The manufacture of bimetal parts by building-up is expedient, since this method makes it possible to remove initial stresses after cooling for any combinations of cladding and base metals. There are 1 figure, and 2 Soviet-bloc references.

ASSOCIATION: Leningradskiy universitet imeni A. A. Zhdanova (Leningrad University imeni A. A Zhdanov)

Card 2/2

POLOZHENTSEV, V.S. [deceased]; TALYPOV, G.B.

Welding deformations and stresses in bimetallic objects. Issl. po uprug. i plast. no.2:187-202 '63. (MIRA 16:8)
(Welding) (Strains and stresses)

TALYPOV, G.B.

Effect of plastic prestressing and natural aging on the behavior of low-carbon steel. Issl. po uprug. i plast. no.2:242-246 '63. (MIRA 16:8)
(Steel—Testing) (Deformations (Mechanics))

TALYPOV, G.B. (Leningrad)

"The investigation of the Bauschinger effect"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

TALYPOV, G.B.

Effect of microstresses producing Bauschinger's effect on the yield point and stability in pure shear. Issl. po uprug. i plast. no.3:237-245 '64.

Effect of natural aging on the yield point. Ibid.:246-248
(MIRA 17:6)

TALYPOV, G.B.

Influence of microstresses causing the Bauschinger's effect on the yield and stability limit in case of a pure shear. Issl. po uprug. i plast. no.3:237-245 '64.

Effect of natural aging on the yield limit. Ibid.:246-248 (MIRA 18:4)

TALYPOV, G.B.; CHISTYAKOV, A.I.

Effect of high preliminary plastic deformations on the yield limit of low-carbon steel. Issl. po uprug. i plast. no.3:249-251 '64. (MIRA 18:4)

TALYPOV, G.B.; CHISTYAKOV, A.I.

Effect of heavy prior plastic deformations on the yield point of low carbon steels. Issl. po uprug. i plast. no.3: 249-251 '64. (MIRA 17:6)

TILYPOV, G.B. (Leningrad)

Investigating the Bauschinger effect. Izv. AN SSSR Mekh. i mashinostr. no.6:131-137 N-D '64. (MIRA 18:2)

SUTURINA, N.G.; TALYPOV, G.B.

Successive yield surfaces in steel. Vest. LGU 20 no.19:126-131 '65.
(MIRA 18:10)

RAKOVIC, M.; TALPOVA, H.

Use of nondestructive activation analysis for determination of sodium in biological material. Cas. lek. cesk. 103 no.23: 632-635 5 Je'64

1. Biofyzikalni ustav fakulty vseobecneho lekarstvi KU [Karlovy university] v Praze; prednosta: doc.dr. Z.Dienstbier.

IVANOVA, M.P., TALYSHEV, F.M.

Problem of electrographic representation of voluntary movements. Zhur.vys.nerv.deiat. 14 no.6:947-952 N-D '64. (MIRA 18:6)

1. Sektor fiziologii Tsentral'nogo nauchno-issledovatel'skogo instituta fizicheskoy kul'tury, Moskva.

TALYSHINSKIY, A. M.

"The Problems of Anesthetization in Surgery of the Ear in the Light of Anatomical-Clinical Considerations." Cand Med Sci, Second Moscow State Medical Inst imeni I. V. Stalin, 6 Dec 54. (VM, 24 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 JUN 55

TALYSHINSKIY, A.M., aspirant

Persistent peripheral paralysis of the larynx caused by a foreign body in the esophagus. Vest. oto-rin. 16 no.6:76-77 N-D '54. (MLRA 8:1)

1. Iz kliniki bolezney ukha, gorla i nosa (dir.-deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. B.S.Preobrazhenskiy) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina.

(ESOPHAGUS, foreign bodies
causing peripheral paralysis of larynx)
(FOREIGN BODIES
esophagus, causing peripheral paralysis of larynx)
(LARYNX, paralysis
caused by foreign body in esophagus)

TALYSHINSKIY, A.M., aspirant

Local anesthesia in ear surgery from an anatomical viewpoint. Vest. otorin. 18 no.2:41-47 Mr-Ap '56. (MLRA 9:7)

1. Iz kliniki bolezney ukha, gorla i nosa (direktor deystvitel'nyy chlen AMN SSSR professor B.S.Preobrashenskiy) lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta imeni I.V.Stalina
(EAR--SURGERY) (LOCAL ANESTHESIA)

TALYSHINSKIY, A.M., kandidat meditsinskikh nauk

Combined anesthesia in otosurgery. Vest.oto-rin. 18 no.6:35-40 N-D '56. (MLRA 10:2)

1. Iz kliniki bolezney ukha, gorla i nosa (dir. - deystvitel'nyy chlen AMN SSSR prof. B.S.Preobrazhenskiy) lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta.

(EAR, dis.
surg., combined anesth.)
(ANESTHESIA
in ear surg.)

TALYSHINSKIY, A.M., kand.med.nauk

Modification of local anesthesia for the retroauricular region in surgery on the temporal bone. Vest.oto-rin. 19 no.3:116 My-Je '57. (MIRA 10:10)

1. Iz kliniki bolezney ukha, gorla i nosa Ryazanskogo meditsinskogo instituta.

(LOCAL ANESTHESIA) (TEMPORAL BONE--SURGERY)

TALYSHINSKIY, A.M., kand.med.nauk (Ryazan')

Anesthesia for the surgical removal of polyps of the ear [with summary in English]. Vest.oto-rin. 20 no.1:36-38 Ja-F '58. (MIRA 11:3)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. I.G.Kozlova) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.

(EAR MIDDLE, neoplasms,
polypi, excis., anesth. (Rus)
(POLYPI, surgery,
middle ear, anesth. (Rus)

TALYSHINSKIY, A.M., kand.med.nauk

Complications caused by general and local anesthesia in otorhinolaryngological practice [with summary in English]. Vest.oto-rin. 20 no.5:19-24 S-O '58 (MIRA 11:12)

1. Iz kliniki bolezney ukha, gorla, i nosa (zav. dots. I.G. Kozlova) Ryazanskogo meditsinskogo instituta.

(OTORHINOLARYNGOLOGICAL DISEASE, surgery
anesth. causing compl. & fatal reactions (Rus))
(ANESTHESIA, complications
reactions & death in otorhinolaryngol. surg. (Rus))

TALYSHINSKIY, A.M., kand.med.nauk

Method of anesthesia in setting nose fractures. Azerb.me..zhur. no.7: 72-74 Jl '59. (MIRA 12:12)

1. Iz kliniki bolezney ukha, goral i nosa (zav. - kand.med.nauk I.G. Kozlova) Tyazanskogo meditsinskogo instituta imeni akademika I.P. Pavlova.
(NOSE--FRACTURE) (ANESTHETICS--ADMINISTRATION)

TALYSHINSKIY, A.M., kand.med.nauk

Cerebral cyst resulting from a gunshot wound of the temporal bone. Vest.otorin. 21 no.4:89-90 Jl-Ag '59. (MIRA 12:10)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - dotsent I.G. Kozlova) Ryazanskogo meditsinskogo instituta.
(TEMPORAL BONE wds. & inj.)
(BRAIN dis.)

TALYSHINSKIY, A.M., kand.med.nauk

Infiltration anesthesia in radical surgery in Highmore's antrum. Zhur. ush., nos. i gorl. bol. 20 no.4:62-63 Jl-Ag '60. (MIRA 14:6)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - doktor med.nauk I.G.Kozlova) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.
(NOSE, ACCESSORY SINUSES OF--SURGERY)
(LOCAL ANESTHESIA)

TALYSHINSKIY, A.M., kand.med.nauk

Rare complication during tonsillectomy under local anesthesia.
Vest. otorin. 22 no.1:91-92 Ja-F '60. (MIRA 14:5)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - doktor meditsinskikh nauk I.G.Kozlova) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.

(TONSILS--SURGERY)

TALYSHINSKIY, A. M., dotsent

Use of intratracheal anesthesia in otorhinolaryngological surgery. Vest. otorin. no.4:15-20 '61. (MIRA 15:2)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. kafedroy - prof. I. G. Kozlova) Ryazanskogo meditsinskogo instituta imeni akad. I. P. Pavlova.

(OTOLARYNGOLOGY) (INTRATRACHEAL ANESTHESIA)

TALYSHINSKIY, A.M., dotsent

Use of general and local anesthesia in otorhinolaryngological surgery. Vest. oto-rin. 25 no.2:10-14 Mr-Ap '63.
(MIRA 17:1)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. kafedroy - prof. I.G. Kozlova) Ryazanskogo meditsinskogo instituta imeni akademika I.P. Pavlova.

TALYSHINSKIY, G.F.

Talyshinskiy, G.F. -- "Differences in the Structure of Arteries of the Lower Extremities and the Possibility of Interchanging Them." Cand Med Sci, Azerbaydzhan State Medical Inst, 11 Feb 54. (Bakinskiy Rabochiy, 31 Jan 54)

SO: SUM 168, 22 July 54

TALYSHINSKIY G.F.

TALYSHINSKIY, G.F., kandidat meditsinskikh nauk

Possibility of transplanting arterial trunks in repair of femoral and popliteal arteries. Vest.khir. 74 no.8:30-34 D '54. (MLRA 8:10)

1. Iz kafedry operativnoy khirurgii (zav. prof. G.R.Kurbanov) Gosudarstvennogo Azerbaydzhanskogo meditsinskogo instituta Adres avtora: Baku, bol'nitsa im. Semashko, 14-ykhirurgicheskiy korpus

(ARTERIES, POPLITEAL, surgery, implantation of grafts)
(ARTERIES, FEMORAL, surgery, implantation of grafts)
(TRANSPLANTION, arteries, repair of femoral & popliteal arteries)
(ARTERIES, transplantation, grafting in inj. of femoral & popliteal arteries)

S

USSR / Human and Animal Morphology - Digestive Tract.

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101418

Author : Talyshinskiy, G.; Galkina, Ye.
Inst :
Title : The Relations of the Cystic, Hepatic, and Common Bile Ducts and the Connections of the Latter With the Pancreatic Duct.

Orig Pub : Azerb. tibb. ah., 1957, No. 6, 23-29.

Abstract : In 50 cadavers of patients aged 20-70 years not suffering with diseases of the bile ducts, methods of perfusion of the ducts and of the splanchnic artery revealed that the common bile duct and the pancreatic duct enter the descending portion of the duodenum both conjointly and separately through a series of orifices. In the hepato-duodenal ligament the hepatic artery (HA) forms

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USSR / Human and Animal Morphology - Digestive Tract. S

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101418

an angle of 45 to 60 degrees with the bile duct. With high fusion of the hepatic duct with the cystic duct, the right HA passes under the common bile duct, while with low fusion, the right HA passes under the hepatic duct. The HA only rarely comes off the superior mesenteric artery.

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Talyshinskiy, G.F.

TALYSHINSKIY, G.F., kand.med.nauk

Rare case of a huge cystoma of the ovary. Akush. i gin. 32 no.6: 85-86 N-D '56. (MIRA 10:11)

1. Iz kafedry operativnoy khirurgii Azerbaydzhanskogo meditsinskogo instituta (zav. - prof. G.R.Kurbanov) na baze bol'nitsy imeni Semashko (glavnyy vrach A.A.Ismailov), Baku.
(OVARIES--TUMORS)

TALYSHINSKIY, G.F.

Differences in the external structure of the femoral artery in Scarpa's triangle. Arkh. anat. gist. i embr. 34 no.1:116 Ja-F '57 (MLRA 10:5)

1. Iz kafedry operativnoy khirurgii (zav.-prof. G.R. Kurbanov) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta. Adres avtora: Baku, Azerbaydzhanskiy gosudarstvennyy meditsinskiy institut.

(FEMORAL ARTERY)

TALYSHINSKIY, G.F.

Differences in the external structure of the popliteal artery. Arkh.anat.gist. i embr. 34 no.6:97 N-D '57. (MIRA 11:3)

1. Kafedra operativnoy khirurgii (zav.-prof. G.R.Kurbanov) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta. Adres avtora: AzSSR, Baku, bol'nitsa im. Semashko, 14-b khirurgicheskiy korpus.

(POPLITEAL ARTERY)

TALYSHINSKIY, I.T., kandidat tekhnicheskikh nauk, dotsent.

Calculation of a cylindrical inducter with a closed magnetic circuit. Elektrichestvo no.6:11-15 Je '56. (MLRA 9:9)

1.Leningradskiy elektrotekhnicheskiy institut imeni V.I.Ul'yanova (Lenina).
(Magnetic induction) (Drying apparatus)

TALYSHINSKIY, I.T.

YERMOLIN, N.P., doktor tekhnicheskikh nauk, professor; MAZROMATI, G.S., kandidat tekhnicheskikh nauk, dotsent; TALYSHINSKIY, I.T., kandidat tekhnicheskikh nauk, dotsent.

Review of G.N.Petrov's book "Electric machines." Elektrichestvo no.2:95-96 F '57. (MLRA 10:3)

1. Kafedra elektricheskikh mashin Leningradskogo elektrotekhnicheskogo instituta im. Ul'yanova (Lenina).
(Electric machines)

TALYSHINSKIY, I.T., kand.tekhn.nauk, dotsent

Theory and design of a regulated asynchronous motor with a copper coated hollow ferromagnetic rotor with consideration of higher harmonic m.m.f. and toothed fields of the stator. Izv. LETI no.45: 221-242 '61. (MIRA 16:5)

(Electric motors, Induction)

ZHERIKHIN, I. P., dotsent; TALYSHINSKIY, I. T., dotsent

Problems in designing the drives for small-scale electrodrills. Izv. vys. ucheb. zav.; gor. zhur. 5 no.8:126-132 '62. (MIRA 15:10)

1. Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina). Rekomendovana kafedroy elektricheskikh mashin.

(Boring machinery--Electric driving)

TALYSHINSKIY, R. I.

TALYSHINSKIY, R. I.- "Investigation of Compounding in Self-Excitation of Synchronous Generators of Small Electric Stations." Acad Sci USSR, Power Inst imeni Academician G. M. Krzhyzhanovskiy, Moscow, 1955 (Dissertations for Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

TALYSHINSKIY, R.I., kand.tekhn.nauk; DAVYDOV, V.F., inzh.

Tensometric method of deriving the mechanical characteristics of asynchronous motors with short-circuited rotors. Vest. elektroprom. 32 no.1:52-55 Ja '61. (MIRA 14:3)
(Electric motors, Induction)

TALYSHINSKIY, R.I.; BAYRAMOVA, F.A.

Single-phase induction motor-conditioner "Azerbaijan."
Izv. AN Azerb.SSR. Ser. fiz.-mat. i tekh. nauk no.4:89-96
'62. (MIRA 16:2)
(Electric motors, Induction)

TALYSHINSKIY, R.I., kand. tekhn. nauk; DAVYDOV, V.F., inzh.

Additional losses in an asynchronous chort-circuited motor with noninsulated rotor pins. Elektrotekhnika 35 no.5:16-18 My '64 (MIRA 17:8)

L 3001-66 EWT(1)

ACCESSION NR: AP5020031 UR/0292/65/000/008/0007/0010
621.313.322.001.2

28
B

AUTHOR: Talyshinskiy, R. I. (Candidate of technical sciences); Davydov, V. F. (Engineer)

TITLE: Selecting the value of contact resistance between the rotor rods and the steel core in a squirrel-cage induction motor 29

SOURCE: Elektrotekhnika, no. 8, 1965, 7-10

TOPIC TAGS: induction motor

ABSTRACT: The load-caused loss in size-7, 13--40-kw squirrel-cage 3-phase induction motors determined experimentally (89 motors tested) varied within 1--5.2%, with an average of 2.05% of the supplied power. Pressure-cast aluminum was used in all rotors. This loss causes still higher (percentagewise) reduction in the motor efficiency. An equation developed by the authors in one of their previous articles is analyzed; it establishes the relation between the load-caused loss, the contact resistance, and the slot skewing for any harmonic. A new formula is developed for calculating the maximum possible loss due to rotor cross currents caused by a harmonic; the formula permits evaluating individual contributions

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L 3001-66
ACCESSION NR: AP5020031

of harmonics to the load-caused loss. The assumption that the contact resistance is concentrated at the middle of the rotor core permits determining analytically, with an adequate accuracy, the desirable level of the rotor contact resistance. The calculation of optimal contact resistance is reduced to determining (by means of a formula supplied) its value for that harmonic which causes the greatest influence on the rotor-cross-current additional loss. Orig. art. has: 2 figures, 14 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE

NO REF SOV: 004 OTHER: 001

Card 2/2 nd

L 09936-67 EWT(1)
ACC NR: AP6021056 (A,N) SOURCE CODE: UR/0292/66/000/003/0016/0020

AUTHOR: Talyshinskiy, R. I. (Candidate of technical sciences); Bayramova, F. A. (Engineer)

ORG: none

TITLE: Investigation of the single-phase shaded-pole induction motor

SOURCE: Elektrotekhnika, no. 3, 1966, 18-20

TOPIC TAGS: electric motor, induction motor, shaded pole motor, electric rotating equipment

ABSTRACT: The effect of rotor bar-core resistance on torque characteristics of a DVK-4, 80-w single-phase shaded-pole motor (used in the "Azerbaydzhan" air conditioner) has been theoretically and experimentally investigated. By using the S. S. L. Chang equivalent circuit (Trans. AIEE, 1951, part 1, v. 70, 690) and the method of symmetrical components, the motor torque-speed characteristics, with

Card 1/2 UDC: 621.313.333.025.1

L 09936-67
ACC NR: AP6021056

an allowance for the 3rd, 5th, and 7th harmonics, have been calculated. Three rotors with bar-core resistances of 8, 4, and 0.4 ohm·cm² were built and tested in the above motor. The rotor with the highest resistance has the best characteristics (both theoretical and experimental). It is stated that the characteristics of VVK-4 motors can be improved by using a manufacturing process that would step up the bar-core resistance. Orig. art. has: 4 figures and 7 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 002

Card 2/2

TALYSHINSKIY, R.R.

Old dislocations of the acromial angle of the clavicle. Ortop. travm. i protez. 21 no. 9:64-66 S '60. (MIRA 13:12)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i travmatologii imeni M.I. Sitenko i kafedry ortopedii (dir. i zav. kafedroy - chlen-korrespondent AMN SSSR, prof. N.P. Novachenko) Ukrainskogo instituta usovershenstvovaniya vrachey (dir. - dotsent I.I. Ovsiyenko).
(CLAVICLE—FRACTURE)

TALYSHINSKIY, R.R.

Fractures of the navicular bone in children. Ortop.,travm.i protez. 22 no.3:64-65 '61. (MIRA 14:4)

1. Iz kafedry orotpedii i travmatologii Ukrainskogo instituta usovershenstvovaniya vrachey (dir. - dots. I.I. Ovsiyenko) i Ukrainskogo instituta ortopedii i travmatologii im. M.I. Sitenko (dir. - chlen-korrespondent AMN SSSR prof. N.P. Novachenko).
(WRIST—FRACTURE)

TALYSHINSKIY, R. R.

Anatomical surgical principles of transpleural approaches to the bodies of the median and lower thoracic vertebrae. Ortop., travm. i protez. no.3:14-20 '62. (MIRA 15:6)

1. Iz kafedry ortopedii i travmatologii (zav. - chlen-korr. AMN SSSR prof. N. P. Novachenko) i kafedry topograficheskoy anatomii i operativnoy khirurgii (zav. - dots. G. N. Toporov) Ukrainskogo instituta usovershenstvovaniya vrachey (rektor - dots. I. I. Ovsiyenko). Adres avtora: Khar'kov, Pushkinskaya ul., d 80, Institut ortopedii i travmatologii.

(SPINE--SURGERY) (PLEURA--SURGERY)

TALYSHINSKIY, R.R.

"Semi-open" achillotomy. Ortop. travm. protez. 24 no.7:72 Jl'63 (MIRA 17:2)

1. Iz kafedry ortopedii i travmatologii Ukrainskogo instituta usovershenstvovaniya vrachey (rektor - dotsent I.I.Ovsiyenko) i Ukrainskogo instituta ortopedii i travmatologii imeni M.I. Sitenko (dir. i zav. kafedroy - chlen-korrespondent AMN SSSR prof. N.P.Novachenko). Adres avtora: Pushkinskaya ul., d.80, Institut ortopedii i travmatologii , Khar'kov.

ALTUKHOV, A.F.; TALYSHINSKIY, R.R.

Methodology of applying a thoracobrachial cast with the patient in a recumbent position. Ortop., travm. i protez. 24 no.10: 72 O '63. (MIRA 17:5)

1. Iz kafedry ortopedii i travmatologii Ukrainskogo instituta usovershenstvovaniya vrachey (rektor - dotsent I.I.Ovsiyenko) i Ukrainskogo instituta ortopedii i travmatologii imeni M.I.Sitenko (dir. - chlen-korrespondent AMN SSSR prof. N.P. Novachenko). Adres avtorov: Khar'kov, Pushkinskaya ulitsa, d. 80, Institut ortopedii i travmatologii.

NOVACHENKO, N.P., prof.; KORZH, A.A., doktor med. nauk; MAYSTRENKO, A.K., kand.med. nauk; TALYSHINSKIY, R.R.

Work experience of the Department of Orthopedics and Traumatology of the Ukraine Institute for Advanced Medical Training. Ortop. travm. i protez. 24 no.5:71-73 My '63. (MIRA 17:9)

1. Chlen-korrespondent AMN SSSR (for Novachenko). Adres avtorov: Khar'kov, Pushkinskaya ulitsa, dom 80, Institut ortopedii i travmatologii.

TALYSHKANOV, K.G., inzh.

Determining actual design loads on casings being lowered into vertical and directional wells. Trudy AzNII DN no.5:257-293 '57.
(MIRA 12:4)

(Oil well casing)

SOV/124-58-7-8065 D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 109 (USSR)

AUTHOR: Talyshkhanov, K.G.

TITLE: Establishing More Precisely the Rated Loads for Supporting Columns (Utochneniye raschetnykh nagruzok dlya obsadnykh kolonn)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of the Technical Sciences, presented to the Azerb. industr. in-t (Azerbaydzhan Industrial Institute), Baku, 1958

ASSOCIATION: Azerb. industr. in-t (Azerbaydzhan Industrial Institute), Baku

1. Beams--Design 2. Beams--Mechanical properties

Card 1/1

TALYSHKHANOV, K.G.

More about the safety factor of casing threaded joints when being tightened. Izv. vys. ucheb. zav.; neft' i gaz 3 no.11: 118 '60. (MIRA 14:1)

(Oil well casing)

TALYSHKHANOV, K.G.; RASHEVSKAYA, T.A., red.; MIRKISHIYEVA, S., tekhn. red.

[Taking the resistance of the medium into account in designing casing columns]Raschet obsadnykh kolonn s uchetom soprotivleniia sredy. Baku, Azerbaidzhanskoe gos.izd-vo, 1962. 154 p. (MIRA 15:9)

(Oil well casing)

SOV/19-58-6-558/685

AUTHORS: Shtraykh, I.B., Yevseyev, V.V., Kuznetsov, Yu.I., Sochugov, V.A., and Talyshkin, N.I.

TITLE: A Device for Coloring Band Products (Ustroystvo dlya naneseniya kraski na lentochnyye izdeliya)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 123 (USSR)

ABSTRACT: Class 56a, 1. Nr 113724 (589798 of 11 Jan 58). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A device for coloring leather bands, or belts; consisting of transporting rollers and a coloring apparatus including a partially covered paint bath and a pair of rollers; containing a brush on the paint bath lid contacting the paint-applying roller and a resettable knife with a screw for changing the gap between the work edge of the knife and the paint-feeding roller and in this way adjusting the thickness of the paint layer on leather; a laminar spring pressing on the paint-applying roller ensures even

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A Device for Coloring Band Products SOV/19-58-6-558/685

application of the paint.

Card 2/2

IVANOV, B.I.; ISTOMINA, V.N.; LYUDKOVSKAYA, A.A.; KOSTIKOVA, A.Ya.; TALYZENKOVA, G.P.

Methods of preparing thixotropic lacquer and paint materials. Lakokras. mat. i ikh. prim. no.4:21-27 '61. (MIRA 16:7)

(Paint materials) (Thixotropic substances)

IVANOV, B.I.; ISTOMINA, V.N.; LYUDKOVSKAYA, A.A.; KOSTIKOVA, A.Ya.; TALYZENKOVA, G.P.

Preparation of thixotropic paint materials and study of their physicomechanical properties. Lakokras.mat.i ikh prim. no.1: 28-33 '62. (MIRA 15:4)

(Paint materials)

BORISOV, V.S.; GOL'DIN, L.L.; GORYACHEV, Yu.M.; GREKOV, M.N.; SKACHKOV, S.V.; TALYZIN, A.M.

Measurement of the principal magnetic characteristics of S-units of a proton synchrotron. Prib. i tekh. eksp. 7 no.4:206-212 Jl-Ag '62. (MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.
(Magnetic measurements) (Synchrotron)

TALYZIN, A. N.

120-5-14/35

AUTHORS: Moiseyev, B.N., and Talyzin, A.N.

TITLE: Radio-technical Arrangement for Automatic Processing of the Results of Ionization Measurements (Radiotekhnicheskoye ustroystvo dlya avtomaticheskoy obrabotki rezultatov ionizatsionnykh izmereniy)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.5, pp. 60 - 62 (USSR).

ABSTRACT: The outputs from gas-filled counters in a stack of four are voltage pulses whose amplitudes are proportional to the energy lost by the particles in the counter compartments. Fig. 1 shows the block diagram of the arrangement for dealing with the outputs. The positive pulses from the counters are fed into A_{1-4} where they are converted into rectangular pulses whose duration is proportional to the amplitude of the respective counter signals. If all four rectangles are now added in B, their sum will resemble a 4-step staircase as in Fig.6a. The lowest step will correspond to the highest input signal and the highest to the lowest. In C_{1-3} the three highest steps are separated out and converted back from duration to amplitude. A final summation is carried out in D whence the pulses may be taken to an amplitude analyser and

Cardl/2

Radio-technical Arrangement for Automatic Processing of the Results of Ionization Measurements.

recorded. Circuit diagrams with values are shown in Figs. 2, 3 and 4 and 5 for blocks A, B, C and D. Fig.7 shows the histogram of ionization loss of μ-mesons in a cosmic shower where the particles have energies of approx. 300 MeV. The counters were filled with propane at a pressure of 500 mmHg. The mean square error in the measurement of ionizing power of a single particle does not exceed ± 12.5%. The disadvantage of this arrangement is its comparative complexity (about 30 valves) and slow action (maximum length of cycle approx. 700 μsec.). However, it would appear to be quite reliable. There are 7 figures and 1 Slavic references.

SUBMITTED: February 8, 1957.

AVAILABLE: Library of Congress

Card 2/2

RADKEVICH, I.A.; TALYZIN, A.N.

Annealing permalloy pickups. Prib. i tekh.eksp. 6 no.4:169-170 Jl-Ag '61. (MIRA 14:9)

(Alloys—Heat treatment)

21673D

S/120/62/000/004/034/047
E140/E420

AUTHORS: Talyzin, A.N., Gol'din, L.L., Trokhachev, G.V., Radkevich, I.A., Mozalevskiy, I.A., Sokolovskiy, V.V., Kukavadze, G.M., Belozerova, L.A., Borisov, V.S., Bysheva, G.K., Veselov, M.D., Goryachev, Yu.M.

TITLE: Investigation and correction of the magnetic characteristics of the proton synchrotron C-blocks at small fields

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 184-192

TEXT: Comparative measurements are made on the C-blocks in the residual field (~35 Oe) the injection field (87 Oe) and the field at the beginning of the acceleration cycle (117 Oe). The iron for the magnet blocks was not pre-selected. This had no substantial effect on differences in the dynamic characteristics of the C-blocks, but the differences in residual field constituted 4.25% on the average and reached up to 10%. The mean-square deviation of the magnetic induction was 4.25%, and 1.4% in the injection field, thus exceeding by far the allowable tolerances. The variations were compensated by shunt resistances

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and by changing the order of the blocks. The present article is concerned with the measurement of the magnetic field intensity and its gradient in the residual field, the compensation by resistances connected across compensation windings, compensation of C-blocks at injection, with investigation of the dynamic characteristics. The equilibrium orbit in the synchrotron has not yet been studied in detail but it is found that either as a result of these corrections or the arrangement of the blocks, the loss of particles is fairly small. There are 7 figures and 1 table.

ASSOCIATIONS: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)

SUBMITTED: March 31, 1962

TALYZIN, A. N.

40758

S/120/62/000/004/039/047
E039/E420

24,6739

AUTHORS: Borisov, V.S., Gol'din, L.L., Goryachev, Yu.M., Grekov, N.N., Ryabov, A.P., Skachkov, S.V., Talyzin, A.N.

TITLE: Measurement of the basic magnetic characteristics of the proton synchrotron C-blocks

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 206-212

TEXT: The ratio of the average field to its gradient $\overline{B}/\nabla\overline{B}$ is measured to an accuracy of 0.1% by an absolute method on a number of C-blocks chosen as standard. A comparison is then made with the other blocks. The apparatus consists of three series of six coils mounted on a marble slab 2 m long and 80 x 27 mm^2 cross-section and is supported on the two geodetic markers on the blocks. Signals obtained from these coils are proportional to the rate of change of the magnetic field at the orbital position and the difference between the inner and outer coils is proportional to the rate of change of the field gradient. Values of $\overline{B}/\nabla\overline{B}$ measured on three separate identical coil systems gave the following results: (1) 68.19 mm; (2) 68.05 mm; (3) 68.28 mm giving a mean value of

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Measurement of the basic magnetic ...

68.17 mm. The measurement was repeated using a "point" method with two coils only, one inside and one outside the equivalent orbit. Values of $B/\nabla B$ were made at 19 points in the blocks and at 8 points between blocks for two coil systems. Comparison of results shows: average of first method 68.19 mm; first "point" method value 68.21 mm, second "point" method value 68.40 mm. The high value for the second "point" method is not accounted for and an average of the first two figures is used in calculations. The distribution of the dynamic component of the field and its gradient in the C-blocks and in the gaps between blocks is measured by a compensation method and the residual field by means of a rotating coil. For a field of 5000 gauss

$$\frac{\overline{\nabla B}_{gap}}{\overline{\nabla B}_{block}} = 0.395 \quad \text{and} \quad \frac{\overline{B}_{gap}}{\overline{B}_{block}} = 0.581$$

Measurements of the dependence of $B/\nabla B$ on the induction are also made. Those measurements aid the final choice of the radial distance between the focusing and defocusing groups of blocks and

Card 2/3

S/120/62/000/004/039/047
E039/E420

Measurement of the basic magnetic ...

in determining the basic parameters of the magnetic field correction system. There are 8 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 11, 1962

Card 3/3

40762

S/120/62/000/004/043/047
E039/E420

24.6730
24.6800

AUTHORS: Radkevich, I.A., Sokolovskiy, V.V., Talyzin, A.N., Gol'din, L.L., Bysheva, G.K., Goryachev, Yu.M.

TITLE: Apparatus for measuring magnetic fields with the aid of a permalloy probe and its use for the adjustment of the proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 229-236

TEXT: The probe consists of a plexiglass cylinder along the axis of which is fitted a capillary tube 100 μ inner diameter containing permalloy wire 70 μ diameter and lengths of 10 to 12 mm. Two signal coils of 2500 turns are wound on the cylinder. The signals from these coils are fed into a preamplifier and cathode follower. Measurements of the field and its gradient are made on all 96 C-blocks of the accelerator with an accuracy of better than 0.1 and 0.2% respectively. The dependence of the rate of change of the field with time $\dot{B}$ on the induction B is also obtained. It is noted that $\dot{B}$ varies with a frequency of 600 cycles. This is caused by the use of a 12 phase system rectifier for the magnet supply. The average value of $\dot{B}$ is

Card 1/2

about 7 x 10^3 gauss/sec for values of B up to 120 gauss. Differences in induction ΔB between blocks is shown to be about 6 gauss. Results obtained are discussed and the method of using the probe to adjust the accelerator is described. There are 8 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: March 29, 1962

TALYZIN. A. N.

24.6739

4076h

S/120/62/000/004/045/047
E039/E420

AUTHORS: Sokolovskiy, V.V., Radkevich, I.A., Gol'din, L.L., Kleopov, I.F., Kulakov, F.M., Luzin, V.N., Mozalevskiy, I.A., Okorokov, I.S., Talyzin, A.N., Trokhachev, G.V.

TITLE: The effect of changes in the regime of the proton synchrotron supply systems on the magnetic characteristics of the blocks

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 240-244

TEXT: Measurements are made of the effect on the field and gradient in the C and X-blocks at a level of 90 gauss when the final smoothing condensers are either disconnected or connected symmetrically or non-symmetrically; in addition, the case when the final smoothing condensers are in circuit but the primary smoothing condensers are reduced to one quarter of their usual value is examined. The effect of a shunting thyratron and resistance is also investigated. Changes in the value of the field caused by any of the above do not exceed ± 0.6% while the difference between blocks is about ± 1%. The effect of these

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The effect of changes ...

circuit changes on the rate of growth of the field covers the range +3.2 to -8.3% and for the difference between blocks +5.2 to -6.9%. Changes of the working range without altering the circuit produce significantly smaller effects than are produced by circuit changes, e.g. changes in the average field of separate blocks are 0.2 to 0.3% while the difference between their fields changes only by 0.02 to 0.05%. The introduction of an auxiliary control on the value of the residual field noticeably increases the accuracy of the results, i.e. error reduced to less than a half its previous value. There are 3 figures and 4 tables.

ASSOCIATIONS: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific-Research Institute of Electrophysical Apparatus GKAE)

SUBMITTED: April 11, 1962

Card 2/2

40765

S/120/62/000/004/046/047
E039/E420

24,6730

AUTHORS: Vladimirskiy, V.V., Barabash, L.Z., Pligin, Yu.S., Veselov, M.A., Talyzin, A.N., Tarasov, Ye.K., Kuz'min, A.A.

TITLE: Measurement of the frequency of transverse oscillation of the beam of the 7 Gev proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 245-247

TEXT: Periodic oscillations of the centre of gravity of separate bunches in the proton beam are observed with the aid of the signal electrodes used for determining the beam position. The signals are amplified with a wide band amplifier and observed on a double beam oscillograph using photographic recording. At 0.5 m sec after injection transverse oscillations connected with small initial oscillations of the beam at the moment of injection are observed. These transverse oscillations decay rapidly in 2 to 3 msec. The basic measurements were therefore made by artificially exciting oscillations by applying a transverse electric field ε = 1 to 1.5 KV/cm over a length of $\simeq$ 20 cm for a time of 4 to 10 μ sec. The amplitude of oscillation of the beam in one

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revolution is then $A = 400\ e\varepsilon\ell/pv$ cm where p is the pulse and v is the proton velocity. Immediately after injection the amplitude is about 1 cm and after 100 msec about 0.5 mm. To facilitate analysis the time of injection was limited to about 5 μ sec for a duration of revolution of 9 μ sec and in addition a sinusoidal signal with a frequency of 7/8 the frequency of revolution of the beam is presented on the second trace of the oscillograph. Results are presented showing the frequencies of vertical and radial oscillations which are very near to resonance values: $Q_{z\ max} = 12.94$ and $Q_{r\ min} \simeq 12.55$.
There are 2 figures and 2 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: May 18, 1962

Card 2/2

40766

S/120/62/000/004/047/047
E039/E420

24,6800

AUTHORS: Vladimirskiy, V.V., Gol'din, L.L., Pligin, Yu.S., Veselov, M.A., Talyzin, A.N., Tarasov, Ye.K., Koshkarev, D.G., Lapitskiy, Yu.Ya., Barabash, L.Z. Kleopov, I.F., Lebedev, P.I., Kuz'min, A.A., Batalin, V.A., Onosovskiy, K.K., Uvarov, V.A., Vodop'yanov, F.A.

TITLE: Adjustment of the acceleration regime of the 7 Gev proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 248-255

TEXT: In order to establish the optimum parameters for programming the control frequency the intensity, position, and frequency and amplitude of transverse oscillation of the beam is measured in three stages: (1) during the first revolution, (2) with a circulating beam and (3) with acceleration. For measurements on the first revolution long afterglow scintillation screens are used which are either observed visually or by means of a television camera. The screens are placed in the sections between magnet blocks; 15 in the initial part and 10 in the final part of the chamber. It is shown that the orbit does not

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deviate by more than 1.5 cm from the axis during the first revolution. Circulating beams without acceleration are obtained which continue for 20 to 30 revs. The circulating current is determined by means of a flight tube and the transverse oscillation frequency with an electrostatic probe with double vertical and horizontal plates. Scintillation screens in the form of a grid with 85% transmission are used to show the beam position and diameter for 5 to 10 revs. The beam diameter is shown to be about 4 cm under normal conditions. Investigations are carried out on the optimum form of the frequency - time relation for holding the beam in orbit. The width of the trapping region is $\pm$ 3 Kc/s for an initial frequency of 750 Kc/s which agrees well with theoretical estimates. Preliminary adjustment permitted the attainment of 6.2 Gev protons and after adjustment 7.2 Gev protons were obtained on October 25, 1961. The usual intensity on a normal cycle lies in the range 3 to 5 x 10^9. There are 7 figures and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 11, 1962

TALYZIN, A.N.

5C

L 43087-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-7 IJP(c) GS

ACCESSION NR: AT5007917 S/0000/64/000/000/0137/0145

39

AUTHOR: Barabash, L. Z.; Veselov, M. I.; Gol'din, L. L.; Zenkevich, P. R.; 38
Pligin, Yu. S.; Sivkov, Yu. P.; Talyzin, A. N.; Shegolev, V. A. B+1

TITLE: Survey report: operation of the 7-Gev proton synchrotron of the ITEF 17

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 137-145

TOPIC TAGS: high energy accelerator

ABSTRACT: Operation of the 7-Gev accelerator for the period from September 196[illegible] to May 1963 is discussed. The accelerator was run continuously from 9 a.m. Tuesday to 8 a.m. Saturday, i.e. 95 hours a week. On Saturday and Monday, preventive maintenance operations are carried out on the magnet and experimental rooms and on the accelerator itself. During the indicated period, the accelerator produced beams for physics experiments during 32% of the operating time and was used for 21% of the time for investigative studies on itself. Thus, the full useful time represented 53% of the calendar time. As for the physics experiments, the operations were directed mainly on two or three targets; here, the particles were distributed among three or four installations working independently. In the case of the

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investigations on the accelerator itself, studies were made on the various operational conditions, the form and behavior of the equilibrium orbit, the frequencies of betatron oscillations, the entrapment of particles during acceleration, the effectiveness of fast and slow targets, methods of operating on several targets, etc. At the beginning of the indicated period, the frequency of recurrence was 10 cycles a minute. In mid January it increased to 12 cycles a minute, and at the present time work is being conducted on enhancing it further. The forms of the operating magnetic cycle are discussed. The main work at present is conducted in the case of the trapezoidal form, since introduction of the flat portion sharply enhances the mean power and forces a lowering of the frequency of recurrence of cycles. Transition to the trapezoidal cycle is effected by regulation of the excitation current in the main generator. In the case of the triangular form of the cycle, the current in the magnetic blocks increases linearly for 1.57 seconds from 0 to 2.4 kiloamperes. The inverter state is held for 0.78 second. The variation of the mean (averaged over a week) current strength of the beam of accelerated particles for the indicated period is discussed. The observed beam intensity (about $1.5 \cdot 10^{10}$ particles per pulse) is determined by the main injector, which injects $(7-8) \cdot 10^{10}$ particles into the accelerator. Work is going on at present to increase the number of injected particles and also the coefficient of capture. The

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